

found in its bulb differ from raphides; and endless confusion will continue unless we restrict this term, as proposed in the 'Annals' for September last. The distinctive characters also of the larger crystal prisms, which sometimes, as in *Yucca*, occur in the same leaf with regular raphides, should not be overlooked.

Dioscoreaceæ.—In the fleshy root of *Dioscorea Batatas* (the only part of this plant which I have yet examined) raphides are very abundant. We have before seen how truly *Tamus communis* is a raphidiferous plant. It is a very good example of the constancy of this character, as I have found from many observations, under widely different circumstances, of the stem, leaves, perianth, stamens, and berry. Recently I have examined its yam-like root and young subterranean stem-shoots, and found them all equally rich in raphides. So large and distinct are they in the root, and contrast so remarkably with the starch-granules of which it is chiefly made up, that a more beautiful microscopic object of the kind could not easily be found.

Bromeliaceæ.—Raphides plentiful in the fruit and crown-leaves of the pine-apple (*Ananassa sativa*).

Musaceæ.—In the outer part of the rind of the Banana-fruit (*Musa paradisiaca*?) raphides are numerous, but not so in the pulp.

Edenbridge, Dec. 2, 1863.

[To be continued.]

VI.—Contributions to an Insect Fauna of the Amazon Valley.

COLEOPTERA: LONGICORNES. By H. W. BATES, Esq.

[Continued from vol. xii. p. 381.]

Genus BARYSSINUS, nov. gen.

Body oblong, convex. Antennæ stout, furnished sparingly with setæ beneath. Thorax somewhat short and broad, widening from the front to the tips of the lateral spines, which are very thick, and placed near to the hind angles. Elytra furnished with centro-basal tubercles, surmounted each by a pencil of hairs; the rest of their surface naked; apices scarcely perceptibly truncated. Apical abdominal segments in the male short and obtuse, in the female slightly prolonged, so as to form a short sheath for the ovipositor, the dorsal plate being flattened and obtuse, the ventral bluntly truncated. Mesosternum depressed, not tuberculated. Legs stout; thighs clavate; basal joint of the tarsi short, not surpassing in length the second and third taken together.

This genus, which comprises a few small species resembling

Trypanidius in facies, has some affinity with *Leptostylus*. We are therefore, after pursuing the line of affinities which leads through a series of depressed forms of Leiopodinæ from *Alcidion* to *Paræcus*, brought back again to the starting-point,—the present genus commencing a suite of genera of more convex form of body. The presence of hairy-crested centro-basal ridges or tubercles distinguishes *Baryssinus* from all the genera which follow, whilst the existence of a prominent ovipositor in the females, and the shape of the thorax, with the position of its lateral spines, separate it from *Leptostylus* and the allied groups.

1. *Baryssinus penicillatus*, n. sp.

B. oblongus, cinereo-brunneus, fusco obscure variegatus: thoracis dorso antice tumido: elytris utrinque tricostatis, apice rotundatis. Long. 4 lin. ♂.

Head ash-coloured. Antennæ stout, one and a half times the length of the body (♂), stout, setose beneath, ashy testaceous, tips of the joints (from the third) dusky. Thorax with the anterior part of its disk rising into a large obtusely conical elevation; lateral spines stout and curving posteriorly; surface ashy brown, with indistinct darker brown markings. Elytra oblong-quadrate, being but slightly narrowed to the tips, which are broadly rounded; the disk of each has three faintly marked ribs which do not reach either the base or the apex; centro-basal tubercles each with a thin pencil of black hairs; surface, to the tips, covered with largish punctures, ashy brown, with blackish-brown markings, which form two fasciæ beyond the middle, the anterior one oblique, the posterior one forming a curve on each elytron. Body beneath ashy. Legs pale reddish, clothed with tomentum, which forms rings alternately of an ashy and brown hue.

Beaten from dead branches; woods near Santarem.

2. *Baryssinus bilineatus*, n. sp.

B. oblongus, rufescenti-brunneus, cano fuscoque variegatus: thorace nigro bivittato: elytris apice breviter obtuse truncatis, pone medium vittis duabus abbreviatis nigris. Long. 4¼ lin. ♀.

Head ash-coloured. Antennæ twice the length of the body (♀), setose beneath, ashy reddish, with the tips of the joints (including the first) blackish. Thorax regularly and moderately convex; hind margin with a single row of punctures; surface smooth, and ornamented with two blackish stripes, a line of the same colour also encircling (above) the bases of the lateral tubercles. Elytra oblong, very slightly narrowed to the tips, which appear rounded, but are seen, on close examination, to be obtusely truncate; surface free from raised lines, with the exception of

the centro-basal ridges, which are slightly elevated, but crested with black hairs; the basal part only of the elytra is punctured; the colour is reddish brown, with a light grey tinge near the middle and apex, and a number of small blackish spots, besides a short vitta, on the disk of each behind the middle, which has at each end a whitish spot. Body beneath pale reddish, clothed with ashy-brown tomentum; legs reddish, ringed with ashy and black.

Taken at Ega, on dead branches.

Genus CHÆTANES, nov. gen.

Body oblong, convex, setose. Antennæ one and a half times the length of the body, stout, furnished with a few setæ beneath. Thorax rather narrow, widening slightly from the front; lateral spines distinct, acute, standing out from the sides, and placed at a distance from the hind angles. Elytra with centro-basal tubercles, surmounted each by a crest of hairs; the rest of the surface hispid, with tufts of short bristles and longer setæ; truncated at the tip. Legs stout; thighs abruptly clavate; basal joint of tarsi equal in length to the second and third taken together. Apical abdominal segment in the males with both dorsal and ventral plates deeply notched, the angles of the ventral plate produced into spines: ovipositor elongated in the ♀; dorsal plate acute lanceolate, ventral truncated. Mesosternum in the ♂ plane, in the ♀ tumid, as in *Trypanidius*.

The only species which I have at present seen belonging to this genus has the bulk and general form of the *Trypanidii*; but it differs from them by the presence of crested centro-basal tubercles on the elytra, and by the absence of tubercles on the mesosternum in the male sex.

Chætanes setiger, n. sp.

C. oblongo-ovatus, fuscus, fulvo cinereoque varius: antennis pedibusque squamis cinereis sparsis: elytris apice utrinque macula triangulari nigra velutina liturisque cinereis. Long. 5-6½ lin. ♂ ♀.

Head dull black, sprinkled with tawny-coloured hair-scales. Antennæ scarcely one and a half times the length of the body, even in the males, dull black, sprinkled with minute ash-coloured hair-scales; the bases of the joints (from the fourth) ashy; sparingly setose beneath, the second joint having a little tuft of stiff hairs. Thorax moderately convex, widened from the front to the bases of the lateral spines, which are small and acute, and placed at a short distance from the hind angles; the surface dull black, variegated with tawny; sides (below the spines) ashy-tawny, sprinkled with black. Elytra oblong oval, briefly and rather obliquely truncated at the apex, moderately convex; sur-

face densely clothed with short, erect, black bristles, some of which arise from a little tuft of shorter bristles; moderately punctured; centro-basal tubercles surmounted each by a rather long pencil of hairs: the colour is blackish brown, with a few tawny specks; behind the middle is a short transverse ash-coloured line crossing the suture (in some examples almost obliterated), and close to the apex on each side is a triangular velvety-black spot, notched on its inner side and margined with ashy, the sutural space between the spots being sometimes wholly ash-coloured. Body beneath and legs tawny ashy, sprinkled with black; middle of abdomen black, with edges of segments tawny. The legs are stout; the thighs clavate, the basal joint of the tarsi fully equal in length to the two following taken together.

♂ The apical ventral segment in the male is semicircularly notched, the dorsal segment briefly and obtusely notched.

♀ The apical dorsal segment in the female is much elongated, lanceolate and acute, but not keeled above; the ventral segment semitubular and truncated at the tip.

Ega and S. Paulo, Upper Amazons, on dead branches in the forest. I have a specimen also from the interior of French Guiana, collected by M. Bar.

Genus *ATRYPANIUS*, nov. gen.

Body oblong-oval or elliptical, convex. Head with the front elongated; eyes oblong. Antennæ not much longer than the body, and nearly naked. Thorax as in *Trypanidius*—namely, slightly uneven on the surface, widening from the front to the tips of the lateral spines—which are short, conical, and acute, not curved posteriorly, and placed not much after the middle of the thorax. Elytra with centro-basal ridges not conspicuous; obtuse at the tip, naked. Feet very stout; thighs strongly clavate; basal joint of the tarsi short, scarcely longer than the second. Mesosternum simple. Dorsal and ventral plates of the apical abdominal segment obtuse in the male: ovipositor in the female very short, scarcely apparent beyond the tips of the elytra, the dorsal plate broadly rounded at the tip, the ventral truncated.

The present genus is founded on *Lamia conspersa* of Germar, a species which differs from all the allied genera, except *Trypanidius*, in the shortness of the basal joint of the tarsi. The obtuseness of the apical abdominal segment in both sexes, the shortness of the ovipositor in the female, and the elongation of the eyes and forehead, also distinguish it from most of the groups to which it is in other respects most nearly related. It differs from *Trypanidius* (besides the elongation of the eyes) in the

mesosternum being plane instead of tumid, and also in the style of coloration, although agreeing in general form as well as in the shape of the tarsi. The genus *Trypanidius* is unknown in the Amazons region.

Atrypanius conspersus, Germar.

Lamia conspersa, Germar, Ins. Spec. nov. p. 474.

A. ellipticus, griseus, carneo nigroque conspersus : capite carneo-fulvo, fronte grisea : elytris plaga irregulari pone medium alteraque apicali griseis nigro maculatis, apice breviter oblique truncatis. Long. 4-6 lin. ♂ ♀.

The species has a wide range, being found near Rio Janciro, on the Upper Amazons, and in Mexico. I see no difference in specimens which I have compared from all these widely distant countries.

Genus *PROBATIUS* (Dej. Cat.), Thomson.

Thomson, Classif. des Cérambyc. p. 16.

Body elliptical. Antennæ scarcely one and a half times the length of the body, furnished with short stiff hairs, some of which are arranged in whorls around the tips of the joints. Thorax slightly convex, its outline curvilinearly widening from the front to the tips of the lateral spines, which are placed near the hind angles : ovipositor not produced in the females ; terminal dorsal plate truncate and bidentate in both sexes ; corresponding ventral plate obtuse, and, in the females, slightly notched. Elytra setose, even, briefly truncated and generally spined at the apex. Legs moderate ; thighs clavate ; tarsi short ; basal joint of the hind foot about as long as the two following taken together.

This is one of the best-defined and most homogeneous genera in the host of variable forms constituting the group *Leiopodinæ*. The character drawn from the apical abdominal segment is seen to be constant here, bringing together species agreeing in facies and many other points, but greatly diversified in colours and markings.

1. *Probatius Chryseis*, n. sp.

P. ellipticus : capite thoraceque auratis : elytris viridibus sericeis, nigro setosis, apice mucronatis ; abdomine testaceo-rufo. Long. 5-6 lin. ♂ ♀.

Head and thorax shagreened, of a rich golden colour shading into green with the play of light, naked. Antennæ black, setose ; thoracic spines large, acute, pointing obliquely rearwards, and placed very near to the hind angles. Elytra of a breadth nearly equal to three-fourths their length, thence narrowing to the apex, which, in each clytron, is prolonged into an acute spine ;

surface clothed with minute silky-green scales, and having a well-marked sutural stria with regular rows of black bristles, each proceeding from a puncture. Sides of breast rich golden green; sternum clothed with hoary tomentum; abdomen reddish testaceous, clothed (especially towards the base) with hoary pile. Legs black; thighs beneath hoary.

♂ Apical abdominal segment much longer than the medial segments; ventral plate obtuse at the tip; dorsal plate square, with the angles each produced into a stout tooth.

♀ Apical abdominal segment of the same relative length as in the ♂, but the ventral plate more convex; dorsal plate narrowed towards the tip, and terminating in two stout teeth.

One pair, taken *in copulâ* on a dead branch, at Obydos, on the Guiana side of the Lower Amazons. The insect has a deceptive resemblance to species of the Cerambycideoous genus *Chryso-praxis*, found in the same localities.

2. *Probatius humeralis*, Perty.

Acanthocinus humeralis, Perty, Delectus Anim. Art. Itin. Spix & Martius, p. 91, pl. 18. fig. 8.

P. oblongus, fusco-niger, sericeus: thoracis vitta centrali, scutello, macula elytrorum utrinque humerum circumdante lineaque abbreviata marginali aurantiacis. Long. $4\frac{1}{2}$ lin. ♂ ♀.

The apical abdominal segment is of nearly the same shape in both sexes as in *P. Chryseis*; but the ventral plate in the ♀ is briefly notched at the apex.

This species has a wide range. I have specimens before me from Rio Janeiro, the Upper Amazons, and Cayenne. It is also found in Mexico, but exists there under the form of a well-marked local variety or race, the *P. mexicanus* of Thomson (Classif. des Céramb. p. 17). This differs from the South-American form by the orange-coloured marginal streak extending to the tip of the elytra, instead of halting halfway, and by the thoracic vitta extending over the crown of the head.

3. *Probatius partitus*, White.

P. ellipticus: capite, thorace (brunneo indistincte bivittato) articuloque basali antennarum testaceo-ochraceis: elytris postice valde attenuatis, nigris, nitidis, basi obscure testaceis, maculis minutis griseis in fasciis undulatis tribus dispositis, nigro setosis, striato-punctatis, postice unicarinatis. Long. $4-4\frac{3}{4}$ lin.

The apical abdominal segment is of a similar form in both sexes to that of *P. Chryseis*. The antennæ, excepting the pale basal joint, are black, with the bases of the joints whitish. The thoracic spines are thick, conical, and obtuse. The apical spines

of the elytra are very long and acute, the smooth posterior carinæ of the wing-cases continuing to their tips.

Found at Pará, on dead boughs in the forest. It has also been found by M. Bar in the interior of French Guiana, specimens collected by that gentleman having been sent to me from Paris under the MS. name of *P. ruficollis*.

4. *Probatius apicalis*, n. sp.

P. oblongo-ovatus, fusco-niger, sordide ochraceo canoque variegatus; thorace ochraceo nebuloso, medio fusco bivittato: elytris postice modice attenuatis, apice transverse sinuato-truncatis, angulis externis longe spinosis, dorso punctis setiferis in striis dispositis, dimidio basali maculaque apicali ochraceis nigro conspersis, fascia lata pone medium fusco-nigra lineolis canis variegata: antennis fusco-nigris, infra dense setosis, articulo quarto annulo lato pallido. Long. $4\frac{3}{4}$ lin. ♂ ♀.

Head dingy ochraceous; vertex with two divergent blackish vittæ. Antennæ black; basal joint dingy rufous, second and base of third joints hoary, basal half of fourth whitish; they are furnished with long setæ, the first joint being fringed beneath with them. Thorax dingy ochraceous, partly lighter and partly darker in hue, the centre having two nearly parallel, distinct, dark-brown vittæ; the lateral spines are large, conical, simply acute, and not prolonged at their points. Elytra gradually and moderately narrowed to their tips, which latter are transversely sinuate-truncate, the sutural angle of the truncature being advanced but obtuse, the external angle prolonged into a stout spine; the posterior carina, which in *P. partitus* is very long, is here reduced to a faint elevation close to the tip of each elytron, and the sutural stria is not strongly impressed; the surface has many rows of setiferous punctures; the basal half is dingy ochraceous, much speckled with black; the apical part has an ochraceous patch neatly limited on its anterior edge, and varied with dusky points, the extreme apex near the suture having a smaller opaque ochreous spot; the rest of the elytra is dull blackish, which colour forms a broad fascia, varied only by minute grey linear specks, arranged in lines. Body beneath and legs dingy ashy; tarsi pale testaceous; apical segment of abdomen black; ventral plate obtuse, dorsal plate truncate and bidentate in both sexes.

This was rather a common insect at Ega, on branches of dead trees in the forest.

5. *Probatius ramulorum*, n. sp.

P. ellipticus, fusco-niger, fulvo-ochraceo variegatus: thorace dorso nigro, lineis duabus ochraceis antice convergentibus: elytris fusconigris, maculis ochraceis conspersis et fasciatis, apice oblique trun-

catis, angulis externis vix dentatis: antennis nigris, infra parce setosis, articulo quarto basi pallido. Long. $4\frac{3}{4}$ lin.

Head tawny ochraceous, vertex with two oblique flexuous dusky lines. Antennæ black, two basal joints dingy ochraceous, fourth with the basal third of its length pale testaceous; they are setose, but the basal joint beneath is free from setæ. Thorax on the sides tawny ochraceous, the middle blackish, with two oblique S-shaped streaks converging in front on the fore part of the disk; the dorsal line is also dotted with ochraceous. Elytra strongly narrowed towards the tip, which is not spined, but obliquely truncated, with the sutural angle rounded off and the external one simply acute; the surface is furnished with rows of setiferous punctures; there is no posterior carina, and the colour is shining brown-black, with a sprinkling of tawny specks, some of which collect to form two indistinct narrow fasciæ, one near the middle, the other near the apex. Body beneath dusky, with dingy ashy pile; margins of ventral segments whitish. Legs blackish; claw-joints of the tarsi testaceous. The apical dorsal plate has shortish and rather blunt teeth.

Valley of the Irurá, Santarem; on dead boughs.

Genus OXATHRES, nov. gen.

Body elliptical, moderately convex, setose. Antennæ furnished with numerous setæ. Thorax as in *Probatius*, its outline widening from the front to the tips of the lateral spines, which are small, conical, and placed behind the middle. Abdomen in the male with the apical dorsal plate notched or entire; ventral plate truncated and terminating in two stout teeth, like the dorsal plate of *Probatius*. In the female the apical abdominal segment is prolonged as a conical or short tubular sheath to the ovipositor, the dorsal plate tapering into a very sharp point, and in some species acutely carinated on its upper surface; the ventral plate is simply truncated in the female. Legs moderately short and stout; thighs abruptly clavate; tarsi short, even in the hind legs, much shorter than the tibiæ, but the first joint slender and longer than the two following taken together.

This genus, although closely allied to *Probatius*, is distinguished at once by the bidentation of the apex of the abdomen existing on the ventral instead of the dorsal plate; but this is seen in the males only, the females differing from the same sex in *Probatius* still more widely—namely, by having an exerted ovipositor and a prolonged pointed dorsal plate, instead of a bidentated one.

1. *Oxathres navicula*, n. sp.

O. ellipticus, rufescenti-fuscus vel obscure fuscus: thorace dorso

convexo, lævi, spinis lateralibus brevibus conicis mox pone medium sitis: elytris granulato-punctatis, lineis interruptis cinereis apice peroblique truncatis, angulis interioribus obtusis, externis subacutis. Long. $3\frac{1}{4}$ lin. ♂ ♀.

Head dusky. Antennæ reddish, with a few short stiff hairs both above and beneath the joints, especially at their apices. Thorax convex, smooth, reddish brown, sometimes with a faint ashy vitta on each side, the lateral spines forming simply conical protuberances on the sides, a little behind the middle. Elytra strongly narrowed posteriorly in the ♂, more ovate in the ♀, obliquely and obtusely truncated at the tips; surface with numerous punctures, each surmounted by a raised point, dull reddish or dark brown, with scanty ashy pubescence arranged partly in interrupted lines. Body beneath and legs dull reddish brown or blackish, shining, scantily clothed with ashy pile; legs hirsute; basal joint of the hind tarsi as long as the three remaining joints taken together.

♂ The apical abdominal segment in the ♂ is greatly elongated, at least the ventral plate, with the angles of the apex acute; the dorsal plate is much shorter and deeply notched.

♀ The ovipositor projects beyond the tips of the elytra; apical dorsal plate with raised margins and a sharp keel running into a prolonged point.

Pará and Santarem, on slender dead branches.

2. *Oxathres Erotyloides*, n. sp.

O. ellipticus, flavo-testaceus: elytris cinereis, utrinque nigro decemmaculatis. Long. $4\frac{3}{4}$ lin. ♂.

Head testaceous yellow, with golden-yellow pile. Antennæ black, with three white rings, sparingly clothed with long setæ. Thorax small, yellow-testaceous; lateral spines forming simply conical protuberances on the sides, a little behind the middle. Elytra of equal breadth to about three-fourths of their length, thence rapidly narrowing to their tips, which latter are briefly and rather obliquely truncated; the sutural angle of the truncature rounded off, the external one produced into a short blunt tooth directed outwards; surface densely clothed with dusky setæ and punctured, with an obtuse smooth posterior carina on each side running into the apical tooth. The colour is ashy, with, on each elytron, ten rounded black spots—namely, three on the margin near the shoulders, four in a line parallel to and near the suture, and three on the disk. Body beneath and legs yellow-testaceous; basal joint of tarsi equal in length to the two following taken together. Apical dorsal plate of the abdomen (♂) rounded and closely applied to the ventral plate, which is truncated and strongly bidentate.

I found only one example of this singularly coloured species. It was met with at Ega, on an old stump in the forest, and was mistaken at first for an Erotylien, especially a species of *Priotelus*, which is almost identical in colours with this Longicorn, and which was often seen in similar places when the fallen trees were covered by fungi.

3. *Oxathres muscosus*, n. sp.

O. oblongus, cinereo-olivaceus, nigro conspersus: antennis, pedibus elytrisque longe setosis, his apice sinuato-truncatis, angulis externis breviter mucronatis. Long. $2\frac{1}{2}$ – $2\frac{3}{4}$ lin. ♀.

Head olivaceous, vertex with two dusky spots. Antennæ with all the joints except the basal one furnished with a few longish and straight bristles, placed both above and beneath; they are blackish in colour, with the bases of the joints (from the fourth) pallid. Thorax rather narrow; lateral spines thick, conical, and placed near the hind angles; surface olivaceous, with dusky marks and four rather darker spots on the disk. Elytra oblong, apex sinuate-truncate; sutural angle obtuse, external one produced into a short tooth; surface clothed with long black bristles, punctured towards the base, partly in lines, ashy olivaceous, with numerous black spots, some of which are united near the middle and form an imperfect flexuous belt. Body beneath ashy. Legs hirsute, dingy ashy; tarsi reddish testaceous.

♀ Apical abdominal segment with the dorsal plate lanceolate, the point prolonged and acute; ventral plate simply truncated.

Ega; on dead branches in the forest.

Genus TRICHONIUS, nov. gen.

Body oblong, setose. Antennæ about twice the length of the body in both sexes, furnished with numerous longish setæ. Thorax broad, widening in a curved line from the front to the tips of the lateral spines, which form thick conical protuberances situated near to the hind angles. Elytra setose, not much narrowed behind, with their tips obtusely truncated or rounded. Legs stout, bristly; thighs clavate; tarsi much shorter than the tibiæ, but the basal joint slender and elongated. Apical abdominal segment in ♂ not elongated, with tips of both dorsal and ventral plates broadly rounded; in ♀ slightly prolonged as a sheath to the very short ovipositor, which scarcely passes the tips of the elytra; its dorsal plate flattened and rounded at the tip, its ventral plate truncated.

In the shape of the thorax and setose clothing of the body and limbs this genus resembles *Probatius* and *Oxathres*. It differs from both in the obtuse apices of the ventral and dorsal plates of the terminal abdominal segment in both sexes. There is a

somewhat close relationship between *Trichonius* and *Baryssinus*, but this latter genus is amply distinguished by its crested centro-basal tubercles.

1. *Trichonius quadrivittatus*, n. sp.

T. oblongus, subdepressus : thorace lato, cinereo, fusco quadrivittato : elytris apice obtuse breviter truncatis, cinereis, fusco multiguttatis. Long. $3\frac{1}{4}$ lin. ♀.

Head brownish ashy, vertex with two fuscous dots. Antennæ more than twice the length of the body, bristly both above and beneath, reddish, bases of the joints from the fourth pallid. Thorax short and broad; lateral spines conical, scarcely pointed, and placed very near to the hind angles; surface smooth, brownish ashy, darker in the middle, and with four distinct dark-brown stripes, besides one less distinct on each side below the lateral spines. Elytra rather depressed, slightly narrowed behind, obliquely and very obtusely truncated at the tips, clothed with long bristles, which arise from punctures placed in rows independent of smaller punctures lying rather thickly towards the base; brownish ashy in colour, with a large number of small dark-brown spots which cover the setiferous punctures. Body beneath and legs dingy ashy, the latter bristly.

Villa Nova; on dead branches.

2. *Trichonius fasciatus*, n. sp.

T. oblongus, subdepressus : thorace cinereo, fusco bivittato : elytris apice truncatis, angulis exterioribus prominentibus, cinereis, pone medium fusco fasciatis. Long. $3\frac{1}{4}$ lin. ♀.

Head brownish ashy. Antennæ more than twice the length of the body, blackish, with the basal joint dull reddish, bristly both above and beneath; bases of the joints, from the fourth, pallid. Thorax broad; lateral spines thick, pointed, and slightly curving behind; surface smooth, brownish ashy, darker in the middle, and with two distinct dark-brown vittæ, besides two dusky spots on each side above the lateral spines. Elytra rather depressed, very slightly narrowed behind, transversely truncated at the apex, with the exterior angles slightly produced; surface clothed with long bristles, which arise from punctures placed in rows independent of smaller punctures lying rather thickly towards the base; brownish ashy in colour, with a rather well-defined dark-brown fascia lying behind the middle, besides two small lateral marks of dark-brown colour, one near the base, the other near the apex. Body beneath and legs reddish testaceous, clothed with ashy down; the legs bristly and ringed with dusky.

Santarem.

3. *Trichonius picticollis*, n. sp.

T. oblongus, convexus : thorace spinis lateralibus crassis, leviter

curvatis, dorso brunneo vittis posticis duabus nigris intus albo notatis: elytris breviter setosis, brunneis, postice nigro alboque guttatis, apice rotundatis. Long. $3\frac{1}{4}$ lin. ♂.

Head dingy brown. Antennæ scarcely twice the length of the body, setose, the bristles much longer and more numerous beneath than above; reddish, tips of all the joints blackish; bases of the joints, from the fourth, pallid. Thorax broad, lateral spines very thick, large, and pointed, slightly curving and placed at a short distance from the posterior angles; surface anteriorly clear brown, posteriorly dusky, with two indistinct black vittæ not reaching the front margin, and dotted on their inner sides with whitish; there are also other white specks on the base and sides. Elytra rather more convex than in the allied species, scarce perceptibly truncated at the tips; surface clothed with shortish bristles, which are decumbent, instead of suberect as in the preceding species, and which arise from punctures placed in rows independent of the smaller irregular basal punctures; the colour is purplish brown, with a few indistinct black streaks and dots, and, behind the middle, a number of white specks. Body beneath and legs reddish, clothed with ashy pile; legs hirsute, but not bristly.

S. Paulo, Upper Amazons.

Genus *SPORETUS*, nov. gen.

Body elongate-oblong, free from inequalities on the surface. Antennæ twice the length of the body, setose both above and beneath. Thorax subquadrate, rounded on the sides, and not widened from the front, the lateral spines forming small obtuse tubercles situated some distance from the hind angles. Elytra oblong, clothed with stiff hairs, simply and briefly truncated at the tip. Thighs clavate; hind tarsi with the basal joint elongated. Apical abdominal segment with both dorsal and ventral plates notched in the male, forming a sheath to the more or less exerted ovipositor in the female, the dorsal plate of which is pointed, the ventral truncate.

The few species combined to form this group differ from all the other genera of setose *Leiopodinæ* in the oblong narrow form of their bodies and the subquadrate shape of the thorax, with the shortness of its lateral spines. In colour they are either blackish with ashy spots, or grey sprinkled with blackish.

§ 1. Ovipositor of the ♀ short, scarcely apparent beyond the tips of the elytra (*Chatissus*).

1. *Sporetus* (*Chatissus*) *porcinus*, n. sp.

S. *elongatus*, *hirsutus*, *griseus*, *fusco conspersus*: capite thoraceque elytris angustioribus. Long. $2\frac{3}{4}$ lin. ♀.

Head dull greyish. Antennæ brownish, with the bases of the

joints from the fourth pallid; setose both above and beneath. Thorax grey, with a few indistinct darker markings. Elytra rather wider than the head and thorax, and widened towards two-thirds their length, truncated at the apex, with both angles distinct; surface clothed with long black bristles, grey, with dusky specks lying over the setiferous punctures and arranged in lines. Body beneath and legs dull testaceous, clothed with grey pile; thighs not abruptly clubbed; tarsi very moderately elongated. Ovipositor short; apical dorsal plate of the abdomen broad at the apex, and produced into a point in the middle.

S. Paulo, Upper Amazons.

This species, in the length of the ovipositor of the female, forms a connecting link between *Sporetus* and *Trichonius*; the terminal dorsal plate, although short and broad, is pointed at the apex, and not rounded off as in *Trichonius*.

§ 2. Ovipositor of the ♀ long, projecting to the length of a line beyond the tips of the elytra; dorsal plate tapering to a sharp point.

2. *Sporetus seminalis*, n. sp.

S. fusco-niger, cinereo conspersus: thorace medio cinereo quadriguttato, lateribus utrinque bivittatis: elytris apice albis, oblique truncatis. Long. 3-4 lin. ♂ ♀.

Head dark brown, with a central line from vertex to epistome, another on each side from the upper inner margin of the eye, and the cheeks yellowish ashy. Antennæ black, basal joint red, bases of third, fourth, sixth, eighth, tenth, and eleventh joints white; setose both above and beneath. Thorax above dark brown, the disk having four ashy dots, namely, one each on the front and hind margins, and two, smaller and more rounded, placed transversely in the middle; the sides each with two oblique ashy lines, which sometimes meet at the hind angle. Elytra with the tips truncate, both angles distinct; surface densely clothed with short stiff hairs, finely punctured, dark brown, with a large number of ashy specks, of different sizes and shapes, the extreme apex having a distinct white spot on each side. Body beneath ashy; sides of breast striped with dark brown. Legs elongated; thighs abruptly clavate, black or pitchy red, ringed with grey; basal joint of hind tarsi longer than the three remaining taken together.

Pará and Ega; not uncommon: found also at Cayenne. At Ega a strongly marked variety occurred, which merits separate name and mention:—

Var. *agglomeratus*. The ashy spots of the elytra are partly collected into large cinereous patches, one on each side, placed

transversely in the middle of the elytron, the space anterior and posterior to this large spot being nearly free from markings.

Long. 3-4 lin. ♂ ♀.

Ega; less common than the type*.

[To be continued.]

VII.—On a new Species of *Hyæna* from the Red Crag of Suffolk.

By E. RAY LANKESTER.

[Plate VIII.]

MOST of the terrestrial Mammals of the Red Crag strata in England are known by few and fragmentary specimens, consisting either of teeth or portions of sea-worn jaws. The species at present recognized amount to thirteen; they are as follows, and are nearly all identical with species from Miocene beds on the continent of Europe:—*Rhinoceros Schleiermachi*, Kaup; *Tapirus priscus*, Kaup; *Sus palæochærus*, Kaup; *Sus antiquus*, Kaup; *Equus*, sp., Owen; *Hipparion*, sp., Owen; *Mastodon angustidens*, Owen; *Cervus dicranoceros*, Kaup; *Megaceros*, sp., Owen; *Felis pardoides*, Owen; *Pterodon*, sp., Owen; *Canis*, sp., Owen; *Ursus*, sp., Owen.

The relations of land and water at the time of the deposition of the Red Crag it is not my intention to discuss, although the presence of a Miocene land-fauna associated with marine Mollusca of an eminently arctic type may have some important bearings on that subject. Attention is merely drawn to the fact as showing the necessity of a comparison with Miocene species in attempting to identify any apparently new Mammalia from the older Crag of Suffolk.

Figs. 5, 6, 7, Pl. VIII., are drawings of a tooth belonging to a species of *Hyæna* which the author obtained from the Red

* The following Rio-Janeiro species belongs also to section 2 of the genus *Sporetus*. It has a strong resemblance to *Probatius ludicrus*, and is confounded with it in some collections:—

S. probatioides. Oblongus sive ellipticus, purpureo-fuscus, sericeus, cinereo maculatus. Caput fuscum, sericeum. Antennæ longissimæ, breviter setosæ, purpureo-fuscæ, articulis (tribus basalibus, 7^{mo} et 9^o exceptis) basi griseis. Thorax convexus; spinis lateralibus minutis mox pone medium sitis; dorso fusco angulis et margine posticis obscure cinereo maculatis. Elytra apice subsinuato-truncata, angulis obtusis, dorso nigro-setosa, punctata, purpureo-fusca, sericea, guttis sex basalibus, maculis duabus lateralibus (una magna ante medium, altera parva pone medium) et signaturis apicalibus cinereis. Corpus subtus griseum. Pedes subelongati, obscure castanei, griseo annulati, haud setosi; femoribus valde clavatis. Maris segmento apicali abdominis emarginato. Long. 4½ lin. ♂. *Hab.* Rio Janeiro, a Dom. Squires lecto.